

PABLO

NARRATIVE REPORT

JANUARY - DECEMBER 1965

PABLO NATIONAL WILDLIFE REFUGE  
NARRATIVE REPORT  
January 3, 1965 to January 1, 1966

REFUGE PERSONNEL

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Frank L. Kenney, Refuge Manager, Charlo, Montana

UNITED STATES DEPARTMENT OF THE INTERIOR  
BUREAU OF SPORT FISHERIES AND WILDLIFE  
FISH AND WILDLIFE SERVICE  
Charlo, Montana

# C O N T E N T S

	<u>Page</u>
I. General	
A. Weather Conditions. . . . .	1
B. Habitat Conditions. . . . .	1
1. Water . . . . .	1
2. Food and Cover. . . . .	1
II. Wildlife	
A. Migratory Birds . . . . .	2
B. Upland Game Birds . . . . .	3
C. Big Game Animals. . . . .	3
D. Fur Animals, Predators, Rodents, and other Mammals. . . . .	3
E. Hawks, Eagles, Owls, Crows, Ravens, and Magpies . . . . .	3
F. Other Birds . . . . .	4
G. Fish. . . . .	4
H. Reptiles. . . . .	4
I. Disease . . . . .	4
III. Refuge Development and Maintenance	
A. Physical Development. . . . .	4
B. Plantings . . . . .	4
C. Collections and Receipts. . . . .	4
D. Control of Vegetation . . . . .	4
E. Planned Burning . . . . .	
F. Fires . . . . .	4
IV. Resource Management	
A. Grazing . . . . .	4
B. Haying. . . . .	5
C. Fur Harvest . . . . .	5
D. Timber Removal. . . . .	
E. Commercial Fishing. . . . .	5
F. Other Uses. . . . .	
V. Field Investigation or Applied Research	
A. Progress Report . . . . .	5
B. . . . .	
C. . . . .	
D. . . . .	
E. . . . .	
VI. Public Relations	
A. Recreational Uses . . . . .	5
B. Refuge Visitors . . . . .	5
C. Refuge Participation. . . . .	5
D. Hunting . . . . .	6
E. Violations. . . . .	6
VII. Other Items	
A. Items of Interest . . . . .	
B. Photographs . . . . .	•Appendix
C. Signature . . . . .	•Appendix

PABLO NATIONAL WILDLIFE REFUGE  
Narrative Report  
January 3, 1965 to January 1, 1966

I. GENERAL

A. Weather Conditions

Temperature and precipitation are recorded at Ninepipe Refuge, 13 airline miles south. Weather conditions are essentially the same. The year began and ended with the reservoir completely frozen over. The winter ice did not begin to break up until April 1st, and it set in again December 15, making more than a hundred days when the reservoir was unusable to waterfowl.

B. Habitat Conditions

Water: As can be seen from the chart below (taken from the Annual Water Program), ample water was available for waterfowl needs throughout the year.

Month	1959-1964 Average	Calendar Yr. 1965	Deviation	
January	3190.7	3194.8	Plus	4.1
February	3193.9	3195.0	"	1.1
March	3190.8	3195.0	"	4.2
April	3199.0	3195.5	Minus	3.5
May	3204.1	3207.0	Plus	2.9
June	3206.5	3206.3	Minus	0.2
July	3205.2	3209.0	Plus	3.8
August	3194.8	3204.1	"	9.3
September	3184.6	3199.3	"	14.7
October	3190.6	3204.7	"	14.3
November	3190.6	3204.4	"	13.8
December	3190.6	3205.2	"	14.6

Food and Cover: Ducks used at least 95% of the standing ripe grain left from the previous year on Montana Fish and Game lands. When the first pintails used the reservoir after the ice broke up on April 1st, this grain was their only known source of food.

The reservoir is not a heavy producer of aquatic vegetation, and the sudden five-and-one-half foot rise of the water level in September flooded the mud shoals which in other years provides valuable browse for geese and American widgeon. However, a high number of divers were sustained during the fall.



## II. WILDLIFE

### A. Migratory Birds

A lengthy discourse on numbers of waterfowl using the refuge becomes less meaningful when the nearby Flathead Lake is taken into consideration. The south bay of this 250,000 acre lake is within 5 airline miles of the refuge. At the slightest provocation, a change in the water level, ice formation, wind or disturbance by hunters, the ducks and geese flock to Flathead Lake.

Whistling Swans: At a time when no swans were found on the refuge, more than a hundred were counted in South Bay. The largest number counted on the refuge was 43, of which 18 were cygnets. This flock remained from November until December.

Canada Geese: Records indicate a slight increase in days-use from 105,000 in 1964 to 120,000 in 1965. Again, a pair of geese produced a brood on the nesting island. This island has produced a brood almost every year since it was built in 1956 at a cost of \$2,000. Prorated over the years, that's \$222.00 per brood. But additional islands will not cost as much because of the experience learned in this pilot project. It is hoped the BIA Kicking Horse YCC will help provide more such islands to replace the nesting areas lost to the increasing human disturbance of Flathead Lake. The pair of geese using the island, along with 5 other pairs, produced 25 goslings this year.

Snow and White-fronted geese were found in small numbers during the fall. Pablo remained completely covered with ice throughout most of the spring migration.

A Blue goose was checked out of a nearby hunting field by a State Game Department employee who said he'd checked others out in years past.

The rising water in the reservoir covered all the mud flats forcing the geese to find browse elsewhere. This situation caused some phenomenal kills. One small party of hunters shot 22 of the big honkers in a nearby field, one morning. Ultimately, the goose season had to be closed to protect the breeding stock.

Mallards: Mallard use was almost double that of 1964, making up 72% of the total duck use. Redheads were next with 7%, followed by Pintails and Widgeon which had about 6% each. The rest of the ducks are distributed in the following order: Ring-necked, Gadwall, Green-winged teal, Common Merganser, Goldeneye, Scaup,

Canvasback, Bufflehead, Hooded Merganser, Shoveler, Ruddy, Blue-winged Teal and Wood Duck. The Mallards were the most prominent nesters with 50 broods, while the Blue-winged Teal followed with about half that many. All of the other nesters combined made up only a small percent. There were, however, at least 3 Wood Duck broods produced. Coot were present in moderate numbers, usually in association with the Widgeon.

Water and Marsh Birds: Common Loons, Red-necked, Horned, Eared and Western Grebes were all present and undoubtedly nested. One of the most pleasing birds that is always present, in numbers from 4 to 20, is the Great Blue Heron.

Shorebirds, Gulls and Terns: Killdeer, and Avocets nest along the main dike. Both the Common and Black Tern are frequently seen during the summer.

Mourning Doves nest in the Russian olives along the southwest shore, but their numbers remain small.

B. Upland Game Birds: Due to the change in farming operations; from cereal crops to pasture; from small farms to large; the pheasants continue to decline in Flathead valley. In 1944, for instance, dairy and beef cows numbered 25,000. Today, the number is upward of 60,000. Twenty years ago, 23,000 acres of wheat were grown, last year there was less than 16,000 acres. The little farmers of those days inadvertantly left good cover along their fence rows and between patches of cropland. They did not have the means to do clean farming, the chemical sprays to kill weed cover or the insect food of the birds. Although Pablo offers excellent cover, it is doubtful that the pheasant population ever exceeds 300 birds, or 1 bird for every 7 acres of habitat.

C. Big Game: Nothing to report.

D. Furbearers, Predators and Other Mammals: Beaver moved into the reservoir in September and at least two lodges have been built. The muskrat population is held in check by Indian trappers. Tracks in a recent snow indicate an abundance of meadow and deer mice, and some weasels and mink.

E. Hawks, Eagles, Owls, Magpies, Crows and Ravens: Both Golden and Bald Eagles arrive with the opening of hunting season to share in the cripples. Other predations birds include, Rough-legged, Marsh, Red-tailed, Sparrow and Duck Hawks. A small number of Crows were seen on the refuge in the summer. Magpies and a couple of Ravens are almost always present.

F. Other Birds: Among the many birds present on the area, the predominant species noted were: Common Redpoll, Solitary Vireo, Yellow-throat, Yellow Warbler and Rufous Humming Bird, besides the great numbers of Starlings, Yellow-headed, Red-winged and Brewer's Blackbirds.

G. Fish: The reservoir was stocked May 1st, 1964, with 12,000 fingerling rainbow trout. This summer, these rainbows weighed  $2\frac{1}{2}$  to 3 pounds and were up to 17 inches in length.

H. Reptiles: Painted box turtles were frequently seen.

I. Disease: No known disease found in the area.

### III. REFUGE DEVELOPMENT AND MAINTENANCE

A. Physical Development: One small building was sold and removed from the refuge. The large maintenance building has been almost removed. The remaining timbers will be hauled away as soon as weather permits.

B. Maintenance: Routine fence repairs, posting and clean-up were carried on during the year.

C. Plantings: None

D. Collections and Receipts: None

E. Control of Vegetation: No spraying or control deemed necessary.

F. Fires: None

G. Miscellaneous: A wetlands inventory and map were completed for the area.

### IV. RESOURCE MANAGEMENT

A. Grazing: During years of high water, as 1965, Pablo presents some special grazing problems. The finger-like land projections that protrude from the bounday fences along the southwest side of the refuge, are heavily matted with grass, but inaccessible to cattle until the water goes down enough so that they can reach them by crossing deep fresh marsh land. Frank Webster turned his herd in on May 7, on the south side so that, as the water regressed, the cattle could graze north from one of these peninsulas to the next. This year, however, the water remained high, so these land projections were for the most part unused. Deeply matted dead grass from previous years remains on some portions of the refuge where cattle never graze. An examination of the area is being made to see what can be done to achieve better distribution of the 95 head of cattle which use 425 AUM's each summer. One an-

swer would be to repair the small check dams that were built many years ago to retain water, between the peninsulas mentioned above, after the reservoir is drawn down. When the water is high, these little dams would also serve as bridges connecting the peninsulas and allow freer movement of cattle.

B. Haying: None.

C. Fur Harvest: Indian trappers harvested an estimated 40 muskrats and 10 mink from the reservoir.

D. Commercial Fishing: None.

#### V. FIELD INVESTIGATIONS AND APPLIED RESEARCH

A. Banding:

Geese: In order to better understand the status of the local flock of Canada geese, 47 flightless birds were captured and banded in June. In October, more than a hundred were cannon-netted by the Montana Fish and Game Department, assisted by refuge personnel.

Ducks: Early in October, 132 Pintails and 6 Mallards were banded at Pablo.

B. Censuses: Weekly waterfowl counts were made throughout the year. With the help of Walt Anderson, student assistant from the Bison Range, very thorough study was made of the nesting waterfowl on Pablo.

#### VI. PUBLIC RELATIONS

A. Recreational Uses:

Fishing: Pablo had an estimated 3,100 visitors in 1965. A thousand of these were fishermen. Beautiful rainbows weighing up to 3 lbs. were regularly taken at the inlet. Fishermen stood elbow to elbow lashing the water, many of them getting their limit in an hour or less.

The refuge is completely lacking in facilities to take care of such numbers of people. The toilet was destroyed in 1958 by vandals and never replaced. Toilets and garbage barrels are needed.

B. Refuge Visitors: See Ninepipe NR.

C. Refuge Participation: See Ninepipe NR.

D. Hunting: Small numbers of hunters persistently patrolled the refuge boundaries on all sides. On the north and south boundaries, the State Game Department owns hunting areas and maintains checking stations.

But along the entire west side, the land is held as a part of the Tribal Administrative Reserve. Since an administrative reserve permits the tribe to use any portion of the land, not covered by water, in any way the tribe sees fit, the tribe reserves this land for Indian hunters.

Unrestricted hunting along the west boundary has caused some problems particularly in the sharp wedge of land that penetrates into the refuge a good quarter of a mile. (See wetlands inventory map.) The refuge boundary fence cuts through this piece of land, but the Indian hunters do not respect it. It is hoped that an agreement can be drawn up with the Tribal Council closing the land within the fence to all hunting.

E. Violations: Two Indian boys, aged 15 and 16, were picked up and turned over to the Tribal Council for shooting ducks and pheasants in the above described portion of land. What action was taken, if any, is not known.

SIGNATURE PAGE

Submitted by:

Donna L. Kenney  
(Signature)

Refuge Mgr  
(Title)

Date: Jan 19, 1966

Approved, Regional Office: JW

Date: FEB 21 1966

Joseph L. Sullivan  
(Signature)

Associate Regional Director

(Title)

Approved, Bison Range

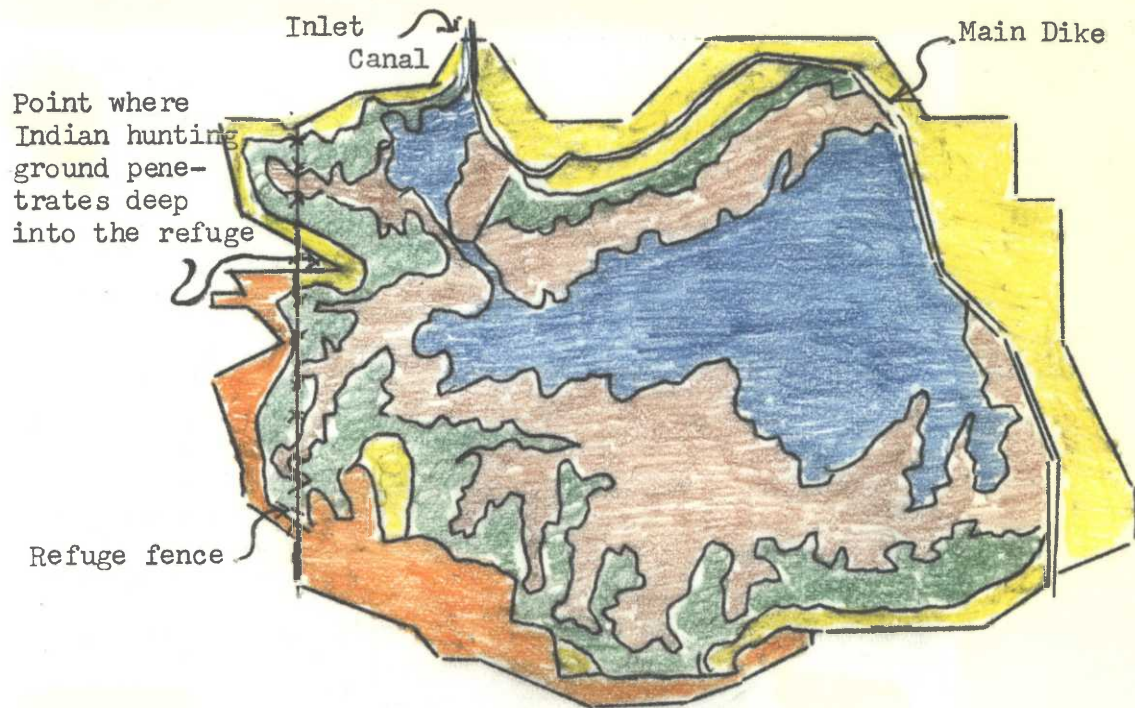
Date: 1/19/66

Joseph P. Mazzoni  
Joe Mazzoni

Refuge Manager

(Title)







#### WARNING TO FISHERMEN

Because of the sudden change in the depth  
of this irrigation water and swiftness  
of the current it is very hazardous to  
attempt to stand or wade in this canal.  
This marker is placed here in memory of  
Fisherman Willis C. Taney of Boulder,  
Colo., who lost his life on Aug. 13, 1963,  
in the swirling waters below the drop when  
he, wearing hip boots, tried to stand in the  
water of the canal.  
Fishermen - Note and remember.



3-1750  
Form NR-1  
(Rev. March 1953)

# WATERFOWL

REFUGE Pablo

MONTHS OF January Thru 10 April, 19 65

[illegible]

3-1750  
Form NR-1  
(Rev. March 1953)

**WATERFOWL**  
(Continuation Sheet)

REFUGE Pablo

MONTHS OF January ~~10~~ April, 1965 Thru

(1) Species	(2) Weeks of reporting period								Estimated: Days use: 10
	11	12	13	14	15	16	17	18	
<b>Swans:</b>									
Whistling			31	1	20	20			490
Trumpeter									
<b>Geese:</b>									
Canada				20	30	30	10		630
Cackling									
Brant									
White-fronted									
Snow			3	10			6		133
Blue									
Other Total Geese			3	30	30	30	16		763
<b>Ducks:</b>									
Mallard	50		300	150	200	200	100		7,350
Black									
Gadwall					20	20	20		420
Baldpate				200	100	100	100		3,500
Pintail			2,000	20	100	100	10		15,610
Green-winged teal				100	50	50	20		1,540
Blue-winged teal									
Cinnamon teal									
Shoveler				10	70	70	50		1,400
Wood									
Redhead				10	10	10	10		280
Ring-necked									
Canvasback				200	100	100	50		3,150
Scaup					600	600	100		9,100
Goldeneye				50	100	100	50		2,100
Bufflehead									
Ruddy									
Other C. Merganser				70	50	50	50		1,540
R.B. Merganser					10	10	10		210
Total Ducks	50	0	2,300	810	1,410	1,410	570		46,200
<b>Coot:</b>						150	150		2,100

Total Days Use

Peak Number

Total Production

SUMMARY

Swans 49031Geese 76330Ducks 7,3502,300Coots 2,100150

Principal feeding areas Adjacent MF&C food  
plots. Utl 95% mature standing grain. Diving  
ducks used reservoir as ice melted back from  
shoreline.

Principal nesting area One goose found  
on nesting island, no production at end of  
April.

Reported by Frank Kenney



Form NR-1A  
(Nov. 1945)

(other than waterfowl)

Thru

Refuge....Pablo

Months of January

to April

1956

(over)



(1)	(2)		(3)		(4)		(5)		(6)
III. <u>Doves and Pigeons:</u>									
Mourning dove									
White-winged dove									
IV. <u>Predaceous Birds:</u>									
Golden eagle	Previous	Period	1	4/2	Still	Present			
Duck hawk	"	"	3	4/2	"	"			
Horned owl	"	"	1	2/15	"	"			
Magpie	"	"	15	4/30	"	"			
Raven	"	"	2	4/30	"	"			
Crow	4	4/15	10	4/30	"	"			
Goshawk	2	4/15	2	4/30	"	"			
Red-tailed hawk	1	4/2	1	4/30	"	"			
Marsh hawk	Previous	Period	2	4/30	"	"			
Barn owl	1	4/15	1	4/30	"	"			
Bald eagle	2	4/2	2	4/15	2	4/15			
Reported by.....						Frank Kenney			

# INSTRUCTIONS

- (1) Species: Use the correct names as found in the A.O.U. Checklist, 1931 Edition, and list group in A.O.U. order. Avoid general terms as "seagull", "tern", etc. In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance. Groups: I. Water and Marsh Birds (Gaviiformes to Ciconiiformes and Gruiformes)  
 II. Shorebirds, Gulls and Terns (Charadriiformes)  
 III. Doves and Pigeons (Columbiformes)  
 IV. Predaceous Birds (Falconiformes, Strigiformes and predaceous Passeriformes)
- (2) First Seen: The first refuge record for the species for the season concerned.
- (3) Peak Numbers: The greatest number of the species present in a limited interval of time.
- (4) Last Seen: The last refuge record for the species during the season concerned.
- (5) Production: Estimated number of young produced based on observations and actual counts.
- (6) Total: Estimated total number of the species using the refuge during the period concerned.

3-1752  
Form NR-2  
(April 1946)

# UPLAND GAME BIRDS

Refuge Pablo Months of January to April, 19 65

(1) Species	(2) Density		(3) Young Produced		(4) Sex Ratio	(5) Removals			(6) Total	(7) Remarks
Common Name	Cover types, total acreage of habitat	Acres per Bird	Number broods obs'd.	Estimated Total	Percentage	Hunting	For Re- stocking	For Research	Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.
Ring-necked Pheasant	Shrub....200A Grass...1000A Marsh.....70A Crop resi- due.....1000A Total...2270A	7			1:3		None		300	

## INSTRUCTIONS

### Form NR-2 - UPLAND GAME BIRDS.\*

- (1) SPECIES: Use correct common name.
- (2) DENSITY: Applies particularly to those species considered in removal programs (public hunts, etc.). Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge; once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottomland hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series No. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks.
- (3) YOUNG PRODUCED: Estimated number of young produced, based upon observations and actual counts in representative breeding habitat.
- (4) SEX RATIO: This column applies primarily to wild turkey, pheasants, etc. Include data on other species if available.
- (5) REMOVALS: Indicate total number in each category removed during the report period.
- (6) TOTAL: Estimated total number using the refuge during the report period. This may include resident birds plus those migrating into the refuge during certain seasons.
- (7) REMARKS: Indicate method used to determine population and area covered in survey. Also include other pertinent information not specifically requested.

\* Only columns applicable to the period covered should be used.

3-1754

Form NR-4

(June 1945)

## SMALL MAMMALS

Refuge Small Mammals

Year ending April 30, 1965

(1) Species	(2) Density	(3) Removals						(4) Disposition of Furs					(5) Total Popula- tion	
Common Name	Cover Types & Total Acreage of Habitat	Acres Per Animal	Hunting	Fur Harvest	Predator * Control	For Re- stocking	For Re- search	Share Trapping			Total Refuge Furs Shipped	Furs Donated	Furs Destroyed	
								Permit Number	Trappers Share	Refuge share				
Meadow mouse	Grassland.....670A Crop & Hay land	Unknown		None							None			High
Skunk, striped	Grassland, Crop and Hayland...670A	"		"							"			"
Muskrat	Water and Marsh.....1807A	"		10				BIA	10		"			Medium
Mink	Water and Marsh.....1807A	"		4				BIA	4		"			Medium
Weasel	Marsh.....1292A	"		None							None			Medium

\* List removals by Predator Animal Hunter

\* List removals by Predator Animal Hunter

## REMARKS:

This report incorporates more accurate information than was possible on earlier submitted form.

Frank L Kenney

Reported by



# INSTRUCTIONS

Form NR-4 - SMALL MAMMALS (Include data on all species of importance in the management program; i. e., muskrats, beaver, coon, mink, coyote. Data on small rodents may be omitted except for estimated total population of each species considered in control operations.)

- (1) SPECIES: Use correct common name. Example: Striped skunk, spotted skunk, short-tailed weasel, gray squirrel, fox squirrel, white-tailed jackrabbit, etc. (Accepted common names in current use are found in the "Field Book of North American Mammals" by H. E. Anthony and the "Manual of the Vertebrate Animals of the Northeastern United States" by David Starr Jordan.)
  - (2) DENSITY: Applies particularly to those species considered in removal programs. Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge; once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottom land hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series No. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks.
  - (3) REMOVALS: Indicate the total number under each category removed since April 30 of the previous year, including any taken on the refuge by Service Predatory Animal Hunter. Also show any removals not falling under headings listed.
  - (4) DISPOSITION OF FUR: On share-trapped furs list the permit number, trapper's share, and refuge share. Indicate the number of pelts shipped to market, including furs taken by Service personnel. Total number of pelts of each species destroyed because of unprimeness or damaged condition, and furs donated to institutions or other agencies should be shown in the column provided.
  - (5) TOTAL POPULATION: Estimated total population of each species reported on as of April 30.
- REMARKS: Indicate inventory method(s) used, size of sample area(s), introductions, and any other pertinent information not specifically requested.

3-1750  
Form NR-1  
(Rev. March 1953)

W A T E R F O W L

REFUGE Pablo

MONTHS OF May Thru 10 August, 1965

(1) Species	(2) Weeks of reporting period									
	1	2	3	4	5	6	7	8	9	10
Swans:										
Whistling										
Trumpeter										
Geese:										
Canada	20	20	30	30	30	70	150	120	120	120
Cackling										
Brant										
White-fronted										
Snow										
Blue										
Other										
Ducks:										
Mallard	100	100	100	100	100	1200	1200	500	500	600
Black										
Gadwall	20	20	20	20	20	20	20			
Baldpate	100	100	50	50	50	50	50			20
Pintail	10	10	10	10	10	10	10			30
Green-winged teal	20	20	20	20	20	20	20			
Blue-winged teal	10	10	10	10	10	10	20			200
Cinnamon teal	10	10	10	10	10	10	10			
Shoveler	50	50	50	50	50	50	50			10
Wood						10	10			10
Redhead	10	10	10	10	10	20	20			50
Ring-necked	20	20	20	20	20	20	20	30	30	
Canvasback	50	50	50	50	50	50	50			30
Scaup	100	100	50	50	50	50	50			
Goldeneye	50	50					50			30
Bufflehead										
Ruddy										10
Other C. Merganser	50	50	20	20	20	20	20	10	10	
R.B. Merganser	10	10				10	10			
Total Ducks	610	610	480	480	480	1,600	1,610	540	540	990
Coot:	150	150	150	150	150	150	150	100	100	70



3-1750  
Form NR-1  
(Rev. March 1953)

**WATERFOWL**  
(Continuation Sheet)

REFUGE Pablo

MONTHS OF May 2 TO Sept. 4, 1955

(1) Species	(2) Weeks of reporting period								Production		
	1	2	3	4	5	6	7	8	Estimated days	Broods seen	Total
<b>Swans:</b>											
Whistling											
Trumpeter											
<b>Geese:</b>											
Canada	120	200	200	550	550	550	650	750	29,960	6	25
Cackling											
Brant											
White-fronted											
Snow											
Blue											
Other											
<b>Ducks:</b>											
Mallard	600	400	400	2,000	2,000	2,000	2,500	3,000	111,800	50	300
Black									980	2	10
Gadwall									980	2	10
Baldpate	20	80	80	100	100	100	100	100	8,050	5	25
Pintail	30	30	30	1,500	1,500	1,500	2,000	2,000	60,830	4	21
Green-winged teal									980		
Blue-winged teal	200	100	100	20	20	20	20	100	6,020	23	136
Cinnamon teal									490		
Shoveler	10	10	10	10	10	10	10	10	3,080		
Wood	10	10	10	10	10	10	20	20	910	3	16
Redhead	50	80	80	10	10	10	10	10	2,100	6	32
Ring-necked		90	90	10	10	10	10	10	3,010	5	30
Canvasback	30	10	10	10	10	10	10	10	2,940	2	12
Scaup									3,150		
Goldeneye	30	30	30	10	10	10	10	10	2,240	3	18
Bufflehead											
Ruddy	10	10	10	10	10	10	10	10	630		
Other H. Merganser									6,020		
C. Merganser									1,540		
R.B. Merganser									280		
<b>9999 Total Ducks</b>	<b>990</b>	<b>850</b>	<b>850</b>	<b>3,690</b>	<b>3,690</b>	<b>3,690</b>	<b>4,700</b>	<b>5,180</b>	<b>209,030</b>		<b>600</b>
Coot	70	20	20	20	20	20	20	500	14,070	6	40

	Total Days Use	Peak Number	Total Production
Swans			
Geese	29,960	750	25
Ducks	111,800	5,180	600
Coots	14,070	500	40

# SUMMARY

Principal feeding areas Along the receding shores and nearby grain fields.

Principal nesting areas The artificial Island was again used by one pair of geese. The ducks nested mostly above the north shore line.

Reported by Frank Kenney

1-1070

(HQA-1070-1070)

1070-1070

3-1070

1070-1070

1070-1070

1070-1070

MIGRATORY BIRDS  
(other than waterfowl)

Thru

Refuge.....Pablo.....

Months of.....

May

1/6

August

1965

(1) Species	(2) First Seen		(3) Peak Numbers		(4) Last Seen		(5) Production			(6) Total
Common Name	Number	Date	Number	Date	Number	Date	Number Colonies	Total # Nests	Total Young	Estimated Number
I. <u>Water and Marsh Birds:</u>										
Common Loon	Previous	Period	30	9/2	Still	Present	0	Unknown		50
Red-necked Grebe	"	"	40	5/4	"	"	0	20	60	100
Horned Grebe	"	"	180	5/4	"	"	0	Unknown	Unknown	200
Eared Grebe	"	"	240	5/4	"	"	0	"	"	300
Western Grebe	"	"	60	8/1	"	"	0	30	90	110
Great Blue Heron	"	"	20	8/1	"	"	0	0	0	20
II. <u>Shorebirds, Gulls and Terns:</u>										
Killdeer	Previous	Period	100	8/1	Still	Present	Unknown	Unknown	Unknown	200
Avocat	"	"	70	8/10	"	"	"	"	"	150
Common Tern	"	"	30	7/5	"	"	"	"	"	80
Black Tern	20	5/4	20	8/1	"	"	"	"	"	20

(over)



(1)	(2)		(3)		(4)		(5)			(6)
III. <u>Doves and Pigeons:</u>	Previous	Period	150	8/1	Still	Present	0	Unknown	Unknown	200
Mourning dove										
White-winged dove										
IV. <u>Predaceous Birds:</u>	Previous	Period	3	5/1	1	6/1	0	0	0	3
Golden eagle	"	"	4	5/1	Still	Present	0	1	4	8
Duck hawk	"	"	3	5/1	"	"	0	1	4	7
Horned owl	"	"	30	5/1	"	"	0	10	40	70
Magpie	"	"	2	7/5	"	"	0	1	3	5
Raven	"	"	20	5/1	10	7/5	0	2	8	28
Crow	"	"	4	5/1	Still	Present	0	Unknown	Unknown	6
Rough-legged hawk	"	"	4	5/1	"	"	0	2	5	9
Marsh hawk	"	"	2	5/1	"	"	0	Unknown	Unknown	4
Red-tailed hawk	"	"	8	5/1	"	"	0	"	"	10
Sparrow hawk										
						Reported by	Frank Kenney			

#### INSTRUCTIONS

- (1) Species: Use the correct names as found in the A.O.U. Checklist, 1931 Edition, and list group in A.O.U. order. Avoid general terms as "seagull", "tern", etc. In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance. Groups: I. Water and Marsh Birds (Gaviiformes to Ciconiiformes and Gruiformes)  
 II. Shorebirds, Gulls and Terns (Charadriiformes)  
 III. Doves and Pigeons (Columbiformes)  
 IV. Predaceous Birds (Falconiformes, Strigiformes and predaceous Passeriformes)
- (2) First Seen: The first refuge record for the species for the season concerned.
- (3) Peak Numbers: The greatest number of the species present in a limited interval of time.
- (4) Last Seen: The last refuge record for the species during the season concerned.
- (5) Production: Estimated number of young produced based on observations and actual counts.
- (6) Total: Estimated total number of the species using the refuge during the period concerned.

3-1750b

Form NR-1B

(Rev. Nov. 1957)

## UNITED STATES

## DEPARTMENT OF THE INTERIOR

## FISH AND WILDLIFE SERVICE

## BUREAU OF SPORT FISHERIES AND WILDLIFE

## WATERFOWL UTILIZATION OF REFUGE HABITAT

Refuge Pablo

For 12-month period ending August 31, 1965

Reported by Frank KenneyTitle Refuge Manager

(1) Area or Unit Designation	(2) Habitat		(3)	(4) Breeding	(5) Production	
	Type	Acreage	Use-days	Population		
	Crops	100A	Ducks	2,261,170	200	600
	Upland	300A	Geese	110,140	10	25
	Marsh	70A	Swans	490	0	0
	Water	2,070A	Coots	485,170	10	40
	Total	2,540A	Total	2,856,970	220	665
	Crops		Ducks			
	Upland		Geese			
	Marsh		Swans			
	Water		Coots			
	Total		Total			
	Crops		Ducks			
	Upland		Geese			
	Marsh		Swans			
	Water		Coots			
	Total		Total			
	Crops		Ducks			
	Upland		Geese			
	Marsh		Swans			
	Water		Coots			
	Total		Total			
	Crops		Ducks			
	Upland		Geese			
	Marsh		Swans			
	Water		Coots			
	Total		Total			
	Crops		Ducks			
	Upland		Geese			
	Marsh		Swans			
	Water		Coots			
	Total		Total			
	Crops		Ducks			
	Upland		Geese			
	Marsh		Swans			
	Water		Coots			
	Total		Total			
	Crops		Ducks			
	Upland		Geese			
	Marsh		Swans			
	Water		Coots			
	Total		Total			

(over)

## INSTRUCTIONS

All tabulated information should be based on the best available techniques for obtaining these data. Estimates having no foundation in fact must be omitted. Refuge grand totals for all categories should be provided in the spaces below the last unit tabulation. Additional forms should be used if the number of units reported upon exceeds the capacity of one page. This report embraces the preceding 12-month period, NOT the fiscal or calendar year, and is submitted annually with the May-August Narrative Report.

- (1) **Area or Unit:** A geographical unit which, because of size, terrain characteristics, habitat type and current or anticipated management practices, may be considered an entity apart from other areas in the refuge census pattern. The combined estimated acreages of all units should equal the total refuge area. A detailed map and accompanying verbal description of the habitat types of each unit should be forwarded with the initial report for each refuge, and thereafter need only be submitted to report changes in unit boundaries or their descriptions.
- (2) **Habitat:** Crops include all cultivated croplands such as cereals and green forage, planted food patches and agricultural row crops; upland is all uncultivated terrain lying above the plant communities requiring seasonal submergence or a completely saturated soil condition a part of each year, and includes lands whose temporary flooding facilitates use of non-aquatic type foods; marsh extends from the upland community to, but not including, the water type and consists of the relatively stable marginal or shallow-growing emergent vegetation type, including wet meadow and deep marsh; and in the water category are all other water areas inundated most or all of the growing season and extending from the deeper edge of the marsh zone to strictly open-water, embracing such habitat as shallow playa lakes, deep lakes and reservoirs, true shrub and tree swamps, open flowing water and maritime bays, sounds and estuaries. Acreage estimates for all four types should be computed and kept as accurate as possible through reference to available maps supplemented by periodic field observations. The sum of these estimates should equal the area of the entire unit.
- (3) **Use-days:** Use-days is computed by multiplying weekly waterfowl population figures by seven, and should agree with information reported on Form NR-1.
- (4) **Breeding Population:** An estimate of the total breeding population of each category of birds for each area or unit.
- (5) **Production:** Estimated total number of young raised to flight age.



3-1752  
Form NR-2  
(April 1946)

UPLAND GAME BIRDS

1613

Refuge Pablo Months of May 2 to September 4, 1965

(1) Species	(2) Density		(3) Young Produced		(4) Sex Ratio	(5) Removals			(6) Total	(7) Remarks
Common Name	Cover types, total acreage of habitat	Acres per Bird	Number broods obs'd.	Estimated Total	Percentage	Hunting	For Re- stocking	For Research	Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.
Ring-necked	Shrub....200A Grass...1000A Marsh.....70A Crop Residue ...1000A Total...2270A	7	7	40	1:3		None		300	

## INSTRUCTIONS

### Form NR-2 - UPLAND GAME BIRDS.\*

- (1) SPECIES: Use correct common name.
- (2) DENSITY: Applies particularly to those species considered in removal programs (public hunts, etc.). Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge; once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottomland hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series No. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks.
- (3) YOUNG PRODUCED: Estimated number of young produced, based upon observations and actual counts in representative breeding habitat.
- (4) SEX RATIO: This column applies primarily to wild turkey, pheasants, etc. Include data on other species if available.
- (5) REMOVALS: Indicate total number in each category removed during the report period.
- (6) TOTAL: Estimated total number using the refuge during the report period. This may include resident birds plus those migrating into the refuge during certain seasons.
- (7) REMARKS: Indicate method used to determine population and area covered in survey. Also include other pertinent information not specifically requested.

\* Only columns applicable to the period covered should be used.

W A T E R F O W L

REFUGE Pablo

MONTHS OF September TO December, 1965

(1) Species	(2) Weeks of reporting period									
	1	2	3	4	5	6	7	8	9	10
Swans:										
Whistling									14	6
Trumpeter										
Geese:										
Canada	750	1,000	1,000	1,000	1,500	1,000	800	800	700	635
Cackling										
Brant										
White-fronted					10	10	2	2		
Snow					10	10	1	1		
Blue										
Other										
Ducks:										
Mallard	3,500	6,000	5,000	5,000	10,000	10,000	25,000	25,000	25,000	25,000
Black										
Gadwall	100	100	50	50						100
Baldpate	1,000	2,000	1,000	1,000	8,000	1,000	2,000	2,000	1,000	1,000
Pintail	2,000	3,000	1,000	1,000	5,000	500	500	500	500	500
Green-winged teal	150	150	200	200	500	500	500	500	1,000	1,000
Blue-winged teal	100		10	10	10					
Cinnamon teal										
Shoveler	10	10				20	20	20		
Wood	20	20				20	20	20		
Redhead	10	200	100	100	1,500	2,800	3,000	3,000	5,000	5,000
Ring-necked	10	100			200	1,500	1,500	1,500	1,500	1,500
Canvasback	30	30	20	20	500	100	100	100	100	100
Scaup	10	10			100	100	100	100	100	1,000
Goldeneye	10	10		50	100	100	100	100	150	150
Bufflehead						20	150	150	150	150
Ruddy	10	10	10	10	20	20	20	20	20	20
Other Hooded Merganser					20	20	20	20	20	20
Common Merganser	150	150	50	50	100	100	100	100	20	20
Red-breasted Merganser										
<del>Sub</del> Total Ducks	7,110	11,840	7,440	7,490	26,050	16,800	33,130	33,130	34,560	35,560
Coot:	500	800	800	800	4,000	1,000	1,000	1,000	1,000	1,000

11,790

3 -1750a

Cont. NR-1

(Rev. March 1953)

W A T E R F O W L  
(Continuation Sheet)

REFUGE

Pablo

MONTHS OF September 11 to December, 1965

(1) Species	(2) Weeks of reporting period								(3) Estimated waterfowl days use	(4) Production : Broods: Estimated : seen : total	
	11	12	13	14	15	16	17	18			
<b>Swans:</b>											
Whistling	42	40		43	34				1,253		
Trumpeter	<del>42</del>	<del>40</del>									
<b>Geese:</b>											
Canada	630	760	880	800	480				89,145		
Cackling											
Brant											
White-fronted									168		
Snow									154		
Blue											
Other Total geese	630	760	880	800	480				89,467		
<b>Ducks:</b>											
Mallard	40,000	40,000	40,000	40,000	10,500	100			2,170,700		
Black											
Gadwall	100	100	100	100	100				6,800		
Baldpate	1,000	1,000	500	500					161,000		
Pintail	500	500	100	100	100				110,600		
Green-winged teal	500	500	500	500	500				50,400		
Blue-winged teal									910		
Cinnamon teal											
Shoveler	50	50	50	50	50				2,310		
Wood									700		
Redhead	5,000	5,000	100	100	100				217,070		
Ring-necked	1,500	500	10	300	300				72,940		
Canvasback	100	100	40	50	50				10,080		
Scaup	1,000	1,000	10	150	150				26,810		
Goldeneye	150	1,100	1,100	1,100	100	10			30,310		
Bufflehead	100	100	50	50	50				6,790		
Ruddy	20	20	20	20	20				1,820		
Other	20	70	70	70	70				2,940		
XXXX Hooded Merg.											
Common Merg.	20	50	2,000	2,000	20				34,510		
<b>Coot:</b> Total Ducks	50,060	50,090	44,650	45,090	12,110	110			2,906,190		
COOT:	1,000	500	500	500 (over)	300				102,900		

	(5)	(6)	(7)
	Total Days Use	Peak Number	Total Production
Swans	1,253	43	
Geese	89,467	1,520	
Ducks	2,906,190	50,090	
Coots	102,900	1,000	

# SUMMARY

**Principal feeding areas** Waterfowl utilized nearby grain fields, particularly the green browse of the winter wheat. Divers apparently found ample food in the reservoir.

**Principal nesting areas**

Reported by Frank L Kenney

## INSTRUCTIONS (See Secs. 7531 through 7534, Wildlife Refuges Field Manual)

- (1) **Species:** In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and national significance.
- (2) **Weeks of Reporting Period:** Estimated average refuge populations.
- (3) **Estimated Waterfowl Days Use:** Average weekly populations x number of days present for each species.
- (4) **Production:** Estimated number of young produced based on observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact should be omitted.
- (5) **Total Days Use:** A summary of data recorded under (3).
- (6) **Peak Number:** Maximum number of waterfowl present on refuge during any census of reporting period.
- (7) **Total Production:** A summary of data recorded under (4).



3-1751

Form NR-1A  
(Nov. 1945)

## MIGRATORY BIRDS

(other than waterfowl)

Thru

Refuge PabloMonths of September 16 December 1965

(1) Species	(2) First Seen		(3) Peak Numbers		(4) Last Seen		(5) Production			(6) Total
Common Name	Number	Date	Number	Date	Number	Date	Number Colonies	Total # Nests	Total Young	Estimated Number
I. <u>Water and Marsh Birds:</u>										
Common Loon	Previous	Period	50	9/15	4	12/15				50
Red-necked Grebe	"	"	100	9/15	10	10/1				100
Eared Grebe	"	"	300	9/15	Unknown	Unknown				300
Western Grebe	"	"	110	9/15	10	12/15				110
Great Blue Heron	"	"	20	9/15	Still	Present				20

(over)

(1)	(2)		(3)		(4)		(5)		(6)
III. <u>Doves and Pigeons:</u>									
Mourning dove	Previous	Period	20	9/15	20	9/15			20
White-winged dove									
IV. <u>Predaceous Birds:</u>									
Golden eagle	Previous	Period	5	12/23	Still	Present			5
Duck hawk	"	"	4	12/23	"	"			4
Horned owl	"	"	7	9/15	"	"			7
Magpie	"	"	70	10/15	"	"			70
Raven	"	"	10	12/23	"	"			10
<del>Crow</del> Red-tailed hawk	"	"	2	10/15	2	10/15			2
Rough-legged hawk	"	"	2	10/15	Still	Present			2
Marsh hawk	"	"	4	12/23	"	"			4
Sparrow hawk	"	"	4	10/15	"	"			4
						Reported by..... Frank Kenney			

#### INSTRUCTIONS

- (1) Species: Use the correct names as found in the A.O.U. Checklist, 1931 Edition, and list group in A.O.U. order. Avoid general terms as "seagull", "tern", etc. In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance. Groups: I. Water and Marsh Birds (Gaviiformes to Ciconiiformes and Gruiformes)  
 II. Shorebirds, Gulls and Terns (Charadriiformes)  
 III. Doves and Pigeons (Columbiformes)  
 IV. Predaceous Birds (Falconiformes, Strigiformes and predaceous Passeriformes)
- (2) First Seen: The first refuge record for the species for the season concerned.
- (3) Peak Numbers: The greatest number of the species present in a limited interval of time.
- (4) Last Seen: The last refuge record for the species during the season concerned.
- (5) Production: Estimated number of young produced based on observations and actual counts.
- (6) Total: Estimated total number of the species using the refuge during the period concerned.



3-1752  
Form NR-2  
(April 1946)

UPLAND GAME BIRDS

1613

Refuge Pablo Months of September Thru 10/ December, 1965

(1) Species	(2) Density		(3) Young Produced		(4) Sex Ratio	(5) Removals			(6) Total	(7) Remarks
Common Name	Cover types, total acreage of habitat	Acres per Bird	Number broods obs'd.	Estimated Total	Percentage	Hunting	For Re- stocking	For Research	Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.
Ring-necked Pheasant	Croplands..175 Haylands... 15 Grasslands..480 <u>670</u>	2.2			1:2.5				300	

## INSTRUCTIONS

### Form NR-2 - UPLAND GAME BIRDS.\*

- |                     |  |
|---------------------|--|
| (1) SPECIES:        | Use correct common name.   |
| (2) DENSITY:        | Applies particularly to those species considered in removal programs (public hunts, etc.). Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge; once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottomland hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series No. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks. |
| (3) YOUNG PRODUCED: | Estimated number of young produced, based upon observations and actual counts in representative breeding habitat.  |
| (4) SEX RATIO:      | This column applies primarily to wild turkey, pheasants, etc. Include data on other species if available.  |
| (5) REMOVALS:       | Indicate total number in each category removed during the report period.   |
| (6) TOTAL:          | Estimated total number using the refuge during the report period. This may include resident birds plus those migrating into the refuge during certain seasons.   |
| (7) REMARKS:        | Indicate method used to determine population and area covered in survey. Also include other pertinent information not specifically requested.  |

\* Only columns applicable to the period covered should be used.



## PUBLIC RELATIONS

(See Instructions on Reverse Side)

Refuge PabloCalendar Year 1965

## 1. Visits

a. Hunting 0 b. Fishing 1,200 c. Miscellaneous 1,200 d. TOTAL VISITS 3,100

## 1a. Hunting (on refuge lands)

TYPE	HUNTERS	ACRES	MANAGED BY
Waterfowl			
Upland Game			
Big Game			
Other			

Number of permanent blinds \_\_\_\_\_

Man-days of bow hunting included above \_\_\_\_\_

Estimated man-days of hunting on lands adjacent to

refuge 2,500

## 1b. Fishing (area open to fishing on refuge lands)

TYPE OF AREA	ACRES	MILES
Ponds or Lakes		
Streams and Shores		<u>4</u>

## 1c. Miscellaneous Visits

Recreation 1,000 Official 100

Economic Use 100 Industrial \_\_\_\_\_

## 2. Refuge Participation (groups)

Listed on Ninepipe NR-6

TYPE OF ORGANIZATION	NO. OF GROUPS	NUMBER IN GROUPS	NO. OF GROUPS	NUMBER IN GROUPS
Sportsmen Clubs				
Bird and Garden Clubs				
Schools				
Service Clubs				
Youth Groups				
Professional-Scientific				
Religious Groups				
State or Federal Govt.				
Other				

## 3. Other Activities

TYPE	NUMBER	TYPE	NUMBER
Press Releases		Radio Presentations	
Newspapers (P.R.'s sent to)		Exhibits	
TV Presentations		Est. Exhibit Viewers	



## INSTRUCTIONS

Item 1: Total of a, b, and c, equal d.

"Visit" - definition. Any person who is on refuge lands or waters during a day or part thereof for the purpose of: hunting, fishing, bird-watching, recreation, business or economic use, official visit, or similar interest. INCLUDE - those who stop within the refuge while traveling on a public highway because of an interest in the area. EXCLUDE - persons engaged in oil or other industry not directly related to the refuge, persons using refuge as most direct route or principal avenue of traffic, and those boating on navigable rivers or the Intercoastal Canal, unless they stop to observe wildlife on the refuge.

Computing visits. Where actual counts are impractical, "sampling" is used with midweek and weekend samples varied by season or weather. A conversion factor of 3.5 (of passengers per car) is used when accurate figures are not available. Each refuge will develop a conversion factor for boats based on range of usage. Count a camper once for each 24-hour period or fraction thereof.

Item 1a: Acres - of refuge open for each type of hunting.

Managed hunts require check in and out of hunters, issuance of permits, or assignment of blinds.

Other - INCLUDE crow, fox, and similar hunting.

Lands adjacent to refuge. Normally considered within 1 mile or less of boundary, unless established sampling procedures cover a wider area. For big game hunting, the distance may be greater.

Item 1b: Acres of streams open to fishing, if practical; otherwise just miles open. Information on "shores" is primarily for coastal fishing.

Item 1c: Recreation. INCLUDE photography, observing wildlife, picnicking, swimming, boating, camping, visitor center use, tours, etc. TOTAL Recreation, Official, and Economic Use visits under Item 1.

Industrial. INCLUDE persons engaged in industry, i.e., oil industry or factories. EXCLUDE these from Item 1.

Item 2: INCLUDE the "On Refuge" groups in Items 1c and 1. In "Off Refuge" column include only those group meetings in which refuge employees actually participate. EXCLUDE these from Items 1c and 1.

Item 3: Exhibits - INCLUDE displays, fairs, parades, and exhibits OFF the refuge; EXCLUDE those ON.





3-1758  
Form NR-8  
(Rev. Jan. 1956)

Fish and Wildlife Service Branch of Wildlife Refuges

CULTIVATED CROPS - HAYING - GRAZING

Refuge Pablo County Blaine State Montana

Cultivated Crops Grown	Permittee's Share Harvested		Government's Share or Return				Total Acreage Planted	Green Manure, Cover and Water- fowl Browsing Crops Type and Kind	Total Acreage
	Acres	Bu./Tons	Harvested		Unharvested				
			Acres	Bu./Tons	Acres	Bu./Tons			
Dryland Wheat	175	All farmed land is in unfenced portion of the refuge and is farmed under BIA permit, or by the Montana Fish and Game department.							175
								Fallow Ag. Land	

No. of Permittees: Agricultural Operations \_\_\_\_\_ Haying Operations \_\_\_\_\_ Grazing Operations \_\_\_\_\_

Hay - Improved (Specify Kind)	Tons Harvested	Acres	Cash Revenue	GRAZING	Number Animals	AUM'S	Cash Revenue	ACREAGE
Alfalfa (farmed in unfenced portion of refuge)	15			1. Cattle	95	425	all rev. to BIA	480
				2. Other				
				1. Total Refuge Acreage Under Cultivation				190
Hay - Wild				2. Acreage Cultivated as Service Operation				0

DIRECTIONS FOR PREPARING FORM NR-8  
CULTIVATED CROPS - HAYING - GRAZING

Report Form NR-8 should be prepared on a calendar-year basis for all crops which were planted during the calendar year and for haying and grazing operations carried on during the same period.

Separate reports shall be furnished for Refuge lands in each county when a refuge is located in more than one county or State.

Cultivated Crops Grown - List all crops planted, grown and harvested on the refuge during the reporting period regardless of purpose. Crops in kind which have been planted by more than one permittee or this Service shall be combined for reporting purposes.

Permittee's Share - Only the number of acres utilized by the permittee for his own benefit should be shown under the Acres column, and only the number of bushels of farm crops harvested by the permittee for himself should be shown under the Bushels Harvested column. Report all crops harvested in bushels or fractions thereof except such crops as silage, watermelons, cotton, tobacco, and hay, which should be reported in tons or fractions thereof.

Government's Share or Return - Harvested - Show the acreage and number of bushels harvested for the Government of crops produced by permittees or refuge personnel. Unharvested - Show the exact acreage and the estimated number of bushels of grain available for wildlife. If grazing is made available to waterfowl through the planting of grain, cover, green manure, grazing or hay crops, estimate the tonnage of green food produced or utilized and report under Bushels Unharvested column.

Total Acreage Planted - Report all acreage planted, including crop failures.

Green Manure, Cover and Waterfowl Grazing Crops - Specify the acreage, kind and purpose of the crop. These crops and the acreage may be duplicated under cultivated crops if planted during the year, or a duplication may occur under hay if the crop results from a perennial planting.

Hay - Improved - List separately the kinds of improved hay grown. Annual plantings should also be reported under Cultivated Crops, and perennial hay should be listed in the same manner at time of planting.

Total Refuge Acreage Under Cultivation - Report total land area devoted to agricultural purposes during the year.



# REFUGE GRAIN REPORT

Refuge Pablo

Months of January through December, 1965

(1) VARIETY*	(2) ON HAND BEGINNING OF PERIOD	(3) RECEIVED DURING PERIOD	(4) TOTAL	(5) GRAIN DISPOSED OF				(6) ON HAND END OF PERIOD	(7) PROPOSED OR SUITABLE USE*		
				Transferred	Seeded	Fed	Total		Seed	Feed	Surplus

(8) Indicate shipping or collection points \_\_\_\_\_

(9) Grain is stored at \_\_\_\_\_

(10) Remarks \_\_\_\_\_

\*See instructions on back.

## REFUGE GRAIN REPORT

This report should cover all grain on hand, received, or disposed of, during the period covered by this narrative report.

**Report all grain in bushels.** For the purpose of this report the following approximate weights of grain shall be considered equivalent to a bushel: Corn (shelled)—55 lb., corn (ear)—70 lb., wheat—60 lb., barley—50 lb., rye—55 lb., oats—30 lb., soy beans—60 lb., millet—50 lb., cowpeas—60 lb., and mixed—50 lb. In computing volume of granaries, multiply the cubic contents (cu. ft.) by 0.8 bushels.

- (1) List each type of grain separately and specifically, as flint corn, yellow dent corn, square deal hybrid corn, garnet wheat, red May wheat, durum wheat, spring wheat, proso millet, combine milo, new era cowpeas, mikado soy beans, etc. Mere listing as corn, wheat, and soybeans will not suffice, as specific details are necessary in considering transfer of seed supplies to other refuges. Include only domestic grains; aquatic and other seeds will be listed on NR-9.
- (3) Report all grain received during period from all sources, such as transfer, share cropping, or harvest from food patches.
- (4) A total of columns 2 and 3.
- (6) Column 4 less column 5.
- (7) This is a proposed break-down by varieties of grain listed in column 6. Indicate if grain is suitable for seeding new crops.
- (8) Nearest railroad station for shipping and receiving.
- (9) Where stored on refuge: "Headquarters granary," etc.
- (10) Indicate here the source of grain shipped in, destination of grain transferred, data on condition of grain, unusual uses proposed.

Pablo

## ANNUAL REPORT OF PERSTICIDE APPLICATION

Proposal Number	
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Reporting Year

1965

INSTRUCTIONS: Wildlife Refuges Manual, secs. 3252d, 3394b and 3395.

[illegible]

10. Summary of results (continue on reverse side, if necessary)

No pesticides of any kind used on the refuge during the year.